ARIZONA GAME AND FISH DEPARTMENT
HABITAT PARTNERSHIP COMMITTEE
HABITAT ENHANCEMENT AND WILDLIFE MANAGEMENT PROPOSAL

Game Branch / HPC Project Number:	14-528

PROJECT INFORMATION

Project Title: Three Brothers Dirt Tank Renovation

Region and Game Management Unit: R5, GU30B

Local Habitat Partnership Committee (LHPC):
Sierra Vista/Douglas

Was the project presented to the LHPC?
YES[x] **NO**[]

Has this project been submitted in previous years? YES[] **NO**[x]
If Yes, was it funded? YES[] **NO**[] → **Funded HPC Project #(s)**:

Project Type: Renovation of existing dirt tanks

Brief Project Summary:

The Three Brothers ranch consists of 10,224 acres of rangeland situated between the San Pedro River and Tombstone, AZ. The western border of the ranch lies approximately one mile from the river.

Perennial water distribution on the ranch is limited to two sources, located more than five miles from the eastern side of the ranch, and two miles from each other. The existence of five dirt tanks makes an increase of water sources possible. However, lack of maintenance of these tanks by previous owners has allowed them to be silted in over the course of decades. Cleaning out two of the five tanks would improve the availability of water sources for mule deer, quail, javelina, white-tailed deer, mountain lion, turkey and other wildlife in the area.

Livestock distribution is also hampered by the existence of a non-functional "fence to nowhere", and lack of other interior fencing. Currently, cattle are only willing to utilize areas near the two existing water sources, causing over-utilization near them, and under-utilization on other parts of the ranch. By increasing the number of water sources available, the rancher could connect the unfinished fence to a border fence, and still have water within reasonable distances for livestock. The rancher would then be able to rotate his livestock seasonally, and improve overall vegetation conditions on the ranch. This would improve forage and cover for many wildlife species, especially on the lower end of the ranch near the river, where erosion is a continual problem.

Addressing erosion in this watershed is the goal of the Arizona Dept of Environmental Quality, and should this project be chosen for an annual grant, the majority of the cost of this project, in addition to the fence installation and 600 acres of chemical brush removal, will be covered by the ADEQ.

Big Game Wildlife Species to Benefit: Mule Deer, White-tailed Deer, Mountain Lion, Javelina, Quail, & Turkey

Implementation Schedule (Month/Day/Year):

Project Start Date: Fall 2015

Project End Date: Fall 2016

Environmental Compliance:

NEPA Completed: Yes[] No[x] N/A[]
Projected Completion Date: To be completed by ASLD Department, contingent upon funding approval.
State Historic Preservation Office - Archaeological Clearance:
Yes[] No[] N/A[x]
Projected Completion Date: Not needed for dirt tank clean-out, according to ASLD Resource Area Manager.
Arizona Game and Fish Department EA Checklist: N/A[]
To be Completed by: Rana Tucker
Projected Completion Date: Fall 2016

PROJECT FUNDING	
Special Big Game License Tag Funds Requested: **Cost Share or Matching Funds**:	**$** 6,014 **$** 6,014
Total Project Costs:	**$ 12,028**

PARTICIPANT INFORMATION		
Applicant (please print): Wallace T. Coleman	**Address**: PO Box 591 Willcox, AZ 85644	**E-mail**: Rlelam83@gmail.com
Telephone: 520-507-2439		**Date**: 08/04/2014
AGFD Contact and Phone No. Rana Tucker – (520)388-4471, John McClard – (520)858-6479		
Project has been coordinated with: ADEQ, NRCS, AZGFD, BLM, ASLD, ARS, SEAZ HPC		

NEED STATEMENT – PROBLEM ANALYSIS:

The Three Brothers Ranch has five dirt tanks in total. They had gone many years without maintenance and had filled in with sediment prior to current ownership. There could potentially be seven water sources for wildlife to utilize, however there are currently only two. The Crow Windmill (BLM Land) and the Hwy 82 Windmill (State Land) are currently the only two water sources on the entire property. These two water sources are greater than 2.5 miles apart and are currently being used by both livestock and wildlife.

Installation of a fence along the northern border of the BLM parcel in the southwest corner of the ranch was initiated, but not completed/connected, leaving a four-mile section of fence to nowhere located in the middle of the ranch. Completion of this fence would allow the rancher to exclude livestock from the BLM allotment for parts of the year, allowing for restoration of vegetation in this area, and better utilization of vegetation in others.

However, this will separate the two perennial water sources, leaving only one for livestock on the State allotment. Cleaning out the two additional dirt tanks would allow livestock excluded from the BLM tank to be better distributed, and encourage better utilization of the range.

PROJECT OBJECTIVES:

1.) Increase availability of water to wildlife in the area, as well as livestock.
2.) Restore functionality to two dirt tanks by cleaning out sediment.
3.) Reduce groundwater use by providing more surface water sources throughout the property.
4.) Improve water infiltration by restoring perennial grasses.
5.) Reduce wildlife habitat degradation near perennial water sources.
6.) Improve quality and quantity of vegetation across the ranch through stock rotation.

PROJECT DESCRIPTION AND STRATEGIES:

The two of five dirt tanks chosen for renovation are in the best location for utilization and range management. They are also the most easily accessible to wildlife in the area. This project involves using a bulldozer or excavator to clean out sediment build up in the tanks. The

Tombstone High School has requested the dirt removed from the tanks, and will provide hauling. Bottom layers of mud will be retained to be used as sealant, as needed. Sediment traps will be installed to reduce future maintenance needs. The spillways will be repaired by the USDA Agricultural Research Service (ARS), which does ongoing research on the Walnut Gulch, which runs through this property. Any mesquite removed will be cut with a chainsaw and treated with herbicide, or pushed out with the bulldozer or excavator, as needed.

The existing "fence to nowhere" was constructed using barbed wire on the top three wires, smooth wire on the bottom fourth wire. The fence that will be installed using ADEQ funds to connect it to an existing boundary fence will be constructed using wildlife-friendly specifications.

Shrub removal will also be completed with ADEQ funds on 600 acres using an aerial application of Spike (tebuthiuron). Chemical will be applied before the winter rains to take advantage of gentle precipitation. According to the NRCS, approximately 2,700 acres of chemical brush treatment have been completed within three miles of the ranch with NRCS funds, and an additional 4,000 acres five miles north-west of there as well. It is likely that as the quality of the grasslands improve as a result of the chemical brush treatment, the wildlife will increase in abundance as well. The renovation of these tanks would add two fairly reliable water sources for wildlife to use as they travel through and into these areas. The Wildlife Manager for this unit has stated that mule deer, white-tailed deer, and mountain lions do frequent this ranch, and agrees the water sources would benefit these species.

PROJECT LOCATION: (See Attached Map) Cochise county, three miles west of the city of Tombstone. Tank 1 is in section 31, T19S, R22e, Tank 2 is in section 7, T20s, R 22E. Both tanks are approximately three miles from the San Pedro River, and two miles from the eastern edge of the ranch.

LAND OWNERSHIP AT THE PROJECT SITE(S)*:*
(if the project area is <u>private property,</u> please state specifically and provide the landowner's name)

- Project sites are owned by the AZ State Lands Dept.

IF PRIVATE PROPERTY, IS THERE A COOPERATIVE BIG GAME STEWARDSHIP or LANDOWNER AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT?
YES[] NO[] N/A[X]

HABITAT DESCRIPTION: Elevation: 4,526'
Mixture of desert shrubs (whitethorn acacia, creosote bush), half shrubs (range rateny, desert zinnia), and perennial grasses (black grama, bush muhley, perennial three-awns) and forbs (leatherweed, dogweed).

ITEMIZED USE OF FUNDS:
<u>Special Big Game License Tag Funds:</u>
Funds will be used to pay Alfred Tellez, contractor, for removal of an estimated 3,251 cubic yards of sediment from tank 1, at a rate of $1.85 per cubic yd. Sediment will be removed using a backhoe and dirt will be hauled off by volunteers from Tombstone High School, where the dirt

will be used on their football field.

SBG Funds itemized cost for Tank 1:
$1.85 per cubic yard of sediment removal cost
3251 cubic yards of material to be removed
Total cost for Tank 1 = $6,014.35

Cost Share or Matching Funds (*for volunteer labor rates please refer to the worksheet below*)
Tank 2 is similar to Tank 1, and will be cleaned out using match funds. Matching funds of approximately $6,000, will be provided by the AZ Department of Environmental Quality, should this ranch be awarded the grant they applied for. This tank will also be renovated as described above. Sediment trap installation will be provided by the Agricultural Research Service.

Match Funds itemized cost for Tank 2:
$1.85 per cubic yard of sediment removal cost
3251 cubic yards of material to be removed
Total cost for Tank 2 = $6,014.35

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION: ADEQ-funding, NCRS-Technical Assistance, Tate Coleman and Jim Coleman-Labor, AZ State Lands Department – cultural resource/NEPA, BLM – cultural resources survey/NEPA, Agricultural Research Service-spillway work

WOULD IMPLEMENTATION OF THIS PROJECT ASSIST IN PROVIDING, MAINTAINING, OR FACILITATING RECREATIONAL ACCESS?
YES[] NO[] N/A[x]

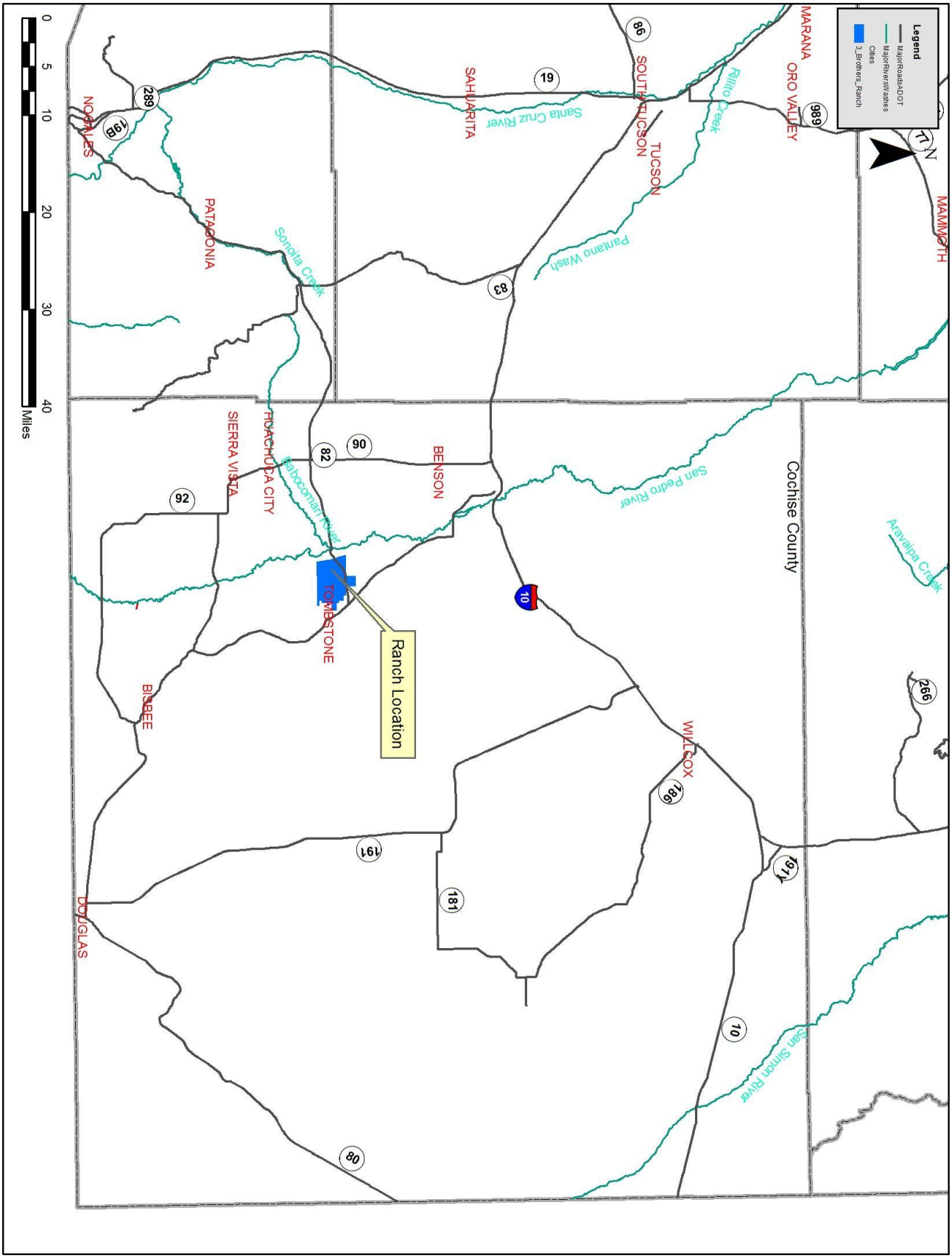
PROJECT MONITORING PLAN: Landowner will schedule projects, and monitor completion. ADEQ, AZGFD, and landowner will monitor success of projects.

PROJECT MAINTENANCE: Future maintenance and upkeep will be the responsibility of the rancher.

PROJECT COMPLETION REPORT TO BE FILED BY: Tate Coleman

WATER DEVELOPMENT PROJECTS (*please use the worksheet below***):**

TREE CLEARING/REMOVAL PROJECTS (*please use the worksheet below***):**


Legend
Major_Roads_ADOT
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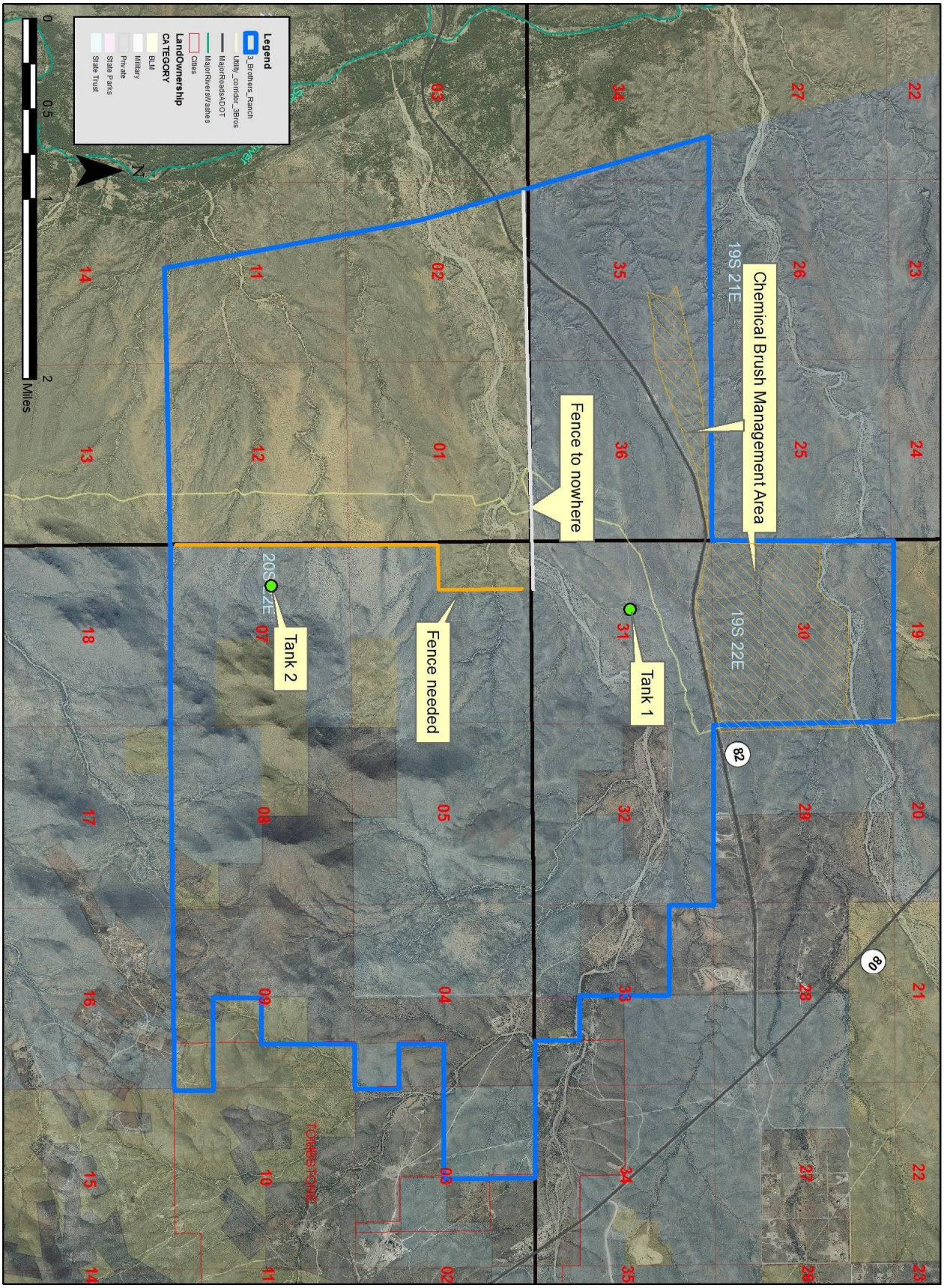
Cities
3_Brothers_Ranch
0
5
10
20
30
40
Miles
N
Ranch Location
Cochise County
NOGALES
PATAGONIA
SAHUARITA
SOUTH TUCSON
TUCSON
MARANA
ORO VALLEY
MAMMOTH
SIERRA VISTA
HUACHUCA CITY
BENSON
TOMBSTONE
BISBEE
DOUGLAS
WILLCOX
Santa Cruz River
Rillito Creek
Sonoita Creek
Pantano Wash
San Pedro River
Babocomari River
Aravaipa Creek
San Simon River
289
198
19
86
989
71
83
82
90
92
10
266
186
191
181
80


Three Brothers Ranch Range Improvement Projects
Chemical Brush Management Area
19S 21E
19S 22E
Fence to nowhere
Fence needed
Tank 1
Tank 2
20S 22E
Legend
3_Brothers_Ranch
Utility_corridor_3Bros
MajorRoads-DOT
MajorRiversWashes
Cities
LandOwnership
CATEGORY
BLM
Military
Private
State Parks
State Trust
0
0.5
1
2
Miles
N
TOMBSTONE

Dirt Tank 1

Dirt Tank 2

ARIZONA GAME AND FISH DEPARTMENT
TREE CLEARING/REMOVAL WORKSHEET

PROJECT TITLE: Three Brothers Dirt Tank Renovation

1) What is the estimated acreage of the project? 2 acres of individual trees will be removed from the area immediately adjacent to the tanks.

2) How are the trees going to be cleared? (agra axe, chain saw, grubbing, push, chaining): Chainsaw or bulldozer

3) What is the estimated number of trees per acre? 75-100

4) Describe trees to be cleared (species, estimated diameter, single stem, multi-stem): Mesquite trees, 1-10", single and multi-stemmed.

5) Describe terrain (slope, soil type, rocks) Soil is calcareous, loamy, formed on mixed gravely and/or loamy alluvium and conglomerate. Soil surface usually well covered with gravel or pan fragments. Maximum volume of rocks >3" is 8%. Terrain is slightly sloping, as tank is situated in a drainage.

6) Please list any special land management status for the project site (e.g. Wilderness, National Park, National Monument). If private land, list landowner. Actual project sites are on ASLD lands, but the area to the west of the tanks is part of the San Pedro River National Recreation Area, managed by the BLM.

7) Please provide the following information about access to the proposed site:
Type of access (mark one): [x]2x4 vehicles []4x4 only []Foot only**

**If foot access only: Distance in miles: Approx. hiking time:

Does access to this site require crossing private or tribal lands? YES[] NO[x]

Is the site relatively accessible for tree removal equipment? YES[x] NO[]

Please describe any restrictions to public access: none